



Substitute for form 1449A/PTO

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

1 of 2

PTO/SB/08a (08-03)

Approved for use through 07/31/2008. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Application Number	10/765,361
Filing Date	JANUARY 27, 2004
First Named Inventor	HUANG, ET AL.
Group Art Unit	UNKNOWN
Examiner Name	UNKNOWN
Attorney Docket Number	AMAT/2592.C8/DSM/LOW KJW

Submission Date 3/9, 2005

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
A1					
A2					
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### FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
<i>Al</i>	B1	EP 1 123 991 A2	08/16/2001	MICHAEL A. TODD		
<i>Al</i>	B2	EP 0 960 958 A2	12/01/1999	LOBODA, ET AL.		
	B3					
	B4					
	B5					

Examiner

*Alby A. Todd*

Date Considered

*3/26/05*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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PTO/SB/08b (08-03)

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Sheet

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10/765,361

Filing Date

JANUARY 27, 2004

First Named Inventor

HUANG, ET AL.

Group Art Unit

UNKNOWN

Examiner Name

UNKNOWN

Attorney Docket Number

AMAT/2592.C8/DSM/LOW K/JW

3/9, 2005

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
<i>AC</i>	C1	BAKLI, ET AL., "Materials and Processing for .025 µm Multilevel Interconnect," Microelectronic Engineering 33 (1997) pp. 175-188.	
	C2	BHAN, ET AL., "Deposition of Stable Low K and High Deposition Rate SiF <sub>4</sub> -Doped TEOS Fluorinated Silicon Dioxide (SiOF) Films," Thin Solid Films 308-309 (1997) pp. 507-511.	
	C3	C.F. LIN, ET AL., "Improved Ozone-Tetraethoxysilane Oxide Reliability for Deep Submicron Inter-Metal Dielectric Applications by Deposition of a Silane-Based Oxide Underlayer," Thin Solid Films 308-309 (1997) pp. 621-626.	
<i>AC</i>	C4	European Search Report from European Patent Office for 99906897.6 (2592.EP), dated 01/10/2005.	
	C5		
	C6		
	C7		
	C8		
	C9		
	C10		
	C11		

Examiner

Date Considered

3/26/05

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PTO/SB/083 (03-03)

Approved for use through 07/31/2006. OMB 0651-C031

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Filing Date	JANUARY 27, 2004
First Named Inventor	HUANG, ET AL.
Group Art Unit	UNKNOWN
Examiner Name	UNKNOWN
Attorney Docket Number	AMAT/2592.C8/DSM/LOW K/JW

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Submission Date

1/14, 2005

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		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
A	B1	EP 0 935 283 A2	08/11/1999	MATSUKI		
	B2	EP 0 469 926 A1	02/05/1992	FELTS		
	B3	EP 0 849 374 A2	06/24/1998	ICHIMURA		
	B4	EP 0 774 533 A2	05/21/1997	LOBODA		
	B5	WO 99/55526 A1	11/04/1999	ROSE, ET AL.		
	B6	WO 99/63591 A1	12/09/1999	ZHAO, ET AL.		

Examiner

Date Considered

9/2/05

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PTO/SB/08b (08-03)

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Application Number	10/765,361
Filing Date	JANUARY 27, 2004
First Named Inventor	HUANG, ET AL.
Group Art Unit	UNKNOWN
Examiner Name	UNKNOWN
Attorney Docket Number	AMAT/2592.C8/DSM/LOW KJW

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Submission Date

1/14, 2005

**NON PATENT LITERATURE DOCUMENTS**

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<i>AC</i>	C1	European Search Report for EP 01 30 3567, dated November 4, 2004 (AMAT/2592.P3)	
	C2		
	C3		
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	C5		
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	C7		
	C8		
	C9		
	C10		
	C11		

Examiner

Date Considered

*Alie Shyu* 9/26/05

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PTO/SB/08a (08-03)

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Application Number

10/765,361

Filing Date

JANUARY 27, 2004

First Named Inventor

TZU-FANG HUANG, ET AL.

Group Art Unit

UNKNOWN

Examiner Name

UNKNOWN

Attorney Docket Number

AMAT/2592.C&DSM/LOW K/JW

Submission Date

April 30, 2004

**U.S. PATENT DOCUMENTS**

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		Number-Kind Code <sup>2</sup> (if known)			
AC	A1	US-6,642,157 B1	11/04/2003	Shioya, et al.	
	A2	US-6,593,247 B1	07/15/2003	Huang, et al.	
	A3	US-6,531,714 B1	03/11/2003	Bacchetta	
	A4	US-6,479,409 B2	11/12/2002	Shioya, et al.	
	A5	US-6,479,408 B2	11/12/2002	Shioya, et al.	
	A6	US-6,479,110 B2	11/12/2002	Grill, et al.	
	A7	US-6,455,445 B2	09/24/2002	Matsuki	
	A8	US-6,448,186 B1	09/10/2002	Olson, et al.	
	A9	US-6,437,443 B1	08/20/2002	Grill, et al.	
	A10	US-6,348,725 B2	02/19/2002	Cheung, et al.	
	A11	US-6,340,628 B1	01/22/2002	VanCleempur, et al.	
	A12	US-6,331,494 B1	12/18/2001	Olson, et al.	
	A13	US-6,316,167 B1	11/13/2001	Angelopoulos, et al.	
	A14	US-6,312,793 B1	11/06/2001	Grill, et al.	
	A15	US-6,303,523 B2	10/16/2001	Cheung, et al.	
	A16	US-6,287,990 B1	09/11/2001	Cheung, et al.	
AC	A17	US-6,153,537	11/28/2000	Bacchetta, et al.	
AC	A18	US-6,147,009	11/14/2000	Grill, et al.	

**FOREIGN PATENT DOCUMENTS**

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AC	B1	WO 99/41423 A2	08/19/1999	David Cheung, et al.		
AC	B2	WO 99/21706 A1	05/06/1999	Chung J. Lee, et al.		
AC	B3	DE 196 54 737 A1	12/30/1996	Itoh, et al.		X
	B4					
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A19	6,072,227		06/06/2000	Yau, et al.	
A20	6,068,884		05/30/2000	Rose, et al.	
A21	6,054,379		04/25/2000	Yau, et al.	
A22	6,051,321		04/18/2000	Lee, et al.	
A23	6,045,877		04/04/2000	Gleason, et al.	
A24	5,989,998		11/23/1999	Sugahara, et al.	
A25	5,362,526		11/08/1994	Wang, et al.	
A26	5,320,875		06/14/1994	Hu, et al.	
A27	5,000,113		03/19/1991	Wang, et al.	
A28	4,649,071		03/10/1987	Tajima, et al.	
A29	2004/0038514 A1		02/26/2004	Hydo, et al.	
A30	2004/0039219 A1		02/26/2004	Chen, et al.	
A31	2003/0116421 A1		06/26/2003	Xu, et al.	
A32	2003/0119336 A1		06/26/2003	Matsuki, et al.	
A33	2003/0162408 A1		08/28/2003	Matsuki, et al.	
A34	2003/0162410 A1		08/28/2003	Huang, et al.	
A35	2001/0031563 A1		10/18/2001	Shioya, et al.	
A36	2001/0051445 A1		12/13/2001	Shioya, et al.	

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